This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) A crystal-growing furnace, in particular a vertical Bridgman or vertical gradient freeze crystal-growing furnace having a jacket heater [[(11, 12)]] surrounding the crucible [[(6)]] coaxially and having a device for regulating the heat output of the jacket heater [[(11, 12)]], characterized in that a hollow cylindrical body [[(2)]] made of a heat conducting material is present as a heat bridge between the crucible [[(6)]] and the jacket heater [[(11, 12)]]; at least two thermocouples [[(32, 35; 33, 34)]] which are offset radially relative to one another are provided in a horizontal plane intersecting the jacket heater [[(11, 12)]] and the crucible [[(6)]] for measuring a radial temperature difference, the heat output of the jacket heater [[(11, 12)]] being regulated as a function of the temperature difference.

2. (currently amended) The crystal-growing furnace according to Claim 1, characterized in that at least two jacket heaters [[(11, 12)]] are provided and are arranged such that they are spaced a distance apart in the axial direction, the heat output of each being adjustable independently of the other, and a pair of thermocouples [[(32, 35; 33, 34)]] being provided for each jacket heater [[(11, 12)]].

3. (currently amended) The crystal-growing furnace according to Claim 1 [[or 2]], characterized in that the hollow cylindrical body [[(2)]] has at least two boreholes in which two thermocouples [[(32, 35; 33, 34)]] are provided, radially offset relative to one another, permitting measurement of a radial temperature difference in the hollow cylindrical body, and an electric variable representing this radial temperature difference in the hollow cylindrical body [[(2)]] is sent to a regulating device for the heat output of the jacket heater [[(11, 12)]].

4. (currently amended) The crystal-growing furnace according to Claim 3, characterized in that the borehole for the thermocouple [[(32, 33)]] situated on the outside radially is positioned in the radial direction, and the borehole for the thermocouple [[(34, 35)]], which is situated on the inside radially, is positioned in the axial direction.

5. (currently amended) The crystal-growing furnace according to Claim 3, characterized in that the thermocouples [[(32, 35; 33, 34)]] of a pair of thermocouples are connected electrically back to back, so that the differential voltage forms a measure of the temperature difference.

6. (currently amended) A method of regulating the heat output of a jacket heater [[(11, 12)]] which surrounds the cylindrical core zone of a crystal-growing furnace having a crucible [[(6)]], in particular a vertical Bridgman or vertical gradient freeze crystal-growing furnace, characterized in that the temperature of the jacket heater [[(11, 12)]] is regulated at the temperature in a selected point on the central axis of the crucible [[(6)]].

7. (currently amended) The method of regulating the heat output of a jacket heater [[(11, 12)]], characterized in that the temperature difference between two radially offset points within the jacket heater [[(11, 12)]] in a horizontal plane intersecting the jacket heater [[(11, 12)]] and the crucible [[(6)]] is determined, and the temperature difference thus determined is adjusted to zero by a corresponding regulation of the heat output of the jacket heater [[(11, 12)]].

8. (currently amended) The method of regulating the heat output of a jacket heater [[(11, 12)]] according to Claim 7, characterized in that the crystal-growing furnace is provided with a plurality of heating zones situated one above the other, each defined by a jacket heater [[(11, 12)]], and the regulation of the heat output of the